

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the remarks herewith.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-12 are currently pending. No claims are amended in this paper.

II. REJECTIONS UNDER 35 U.S.C. §102(b) AND §103(a)

Claims 1, 2, 4-9, and 11-12 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,294,873 to Seraji (hereinafter, merely “Seraji”)¹.

Claims 3 and 10 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Seraji in view of U.S. Patent No. 6,853,881 to Watanabe et al. (hereinafter, merely “Watanabe”).

III. RESPONSE TO REJECTIONS

Claim 1 recites, *inter alia*:

“...wherein movement constraint-conditions comprises conditions corresponding to constraints regarding to an original point position of a link, a link posture, a gravity center position of a link, a joint angle, a gravity center position of the robot, or an entire angular momentum” (emphasis added)

The Office Action (see page 3) relies on equation 1 to 10 of Seraji to reject the above-identified features of claim 1. Specifically, the Office Action relies on equation 7,

¹ The Office Action listed U.S. Patent No. 6,505,096 as Seraji. During a telephone interview on May 9, 2008, the Examiner indicated that U.S. Patent No. 5,294,873 is used as a basis of rejection.

equation 8, and equation 10 to rejection constraints regarding to a gravity center position of a link, a gravity center position of a robot, and an entire angular momentum respectively.

Applicant respectfully submits that the cited portion of Seraji fails to teach or disclose the above-identified features of claim 1.

Equation 7 of Seraji expresses a relationship between a static joint torque and the payload, which is treated as a point mass. Nothing in equation 7 discloses or suggests a gravity center position of a link. Equation 8 of Seraji calculates the summation of weighted squares of joint torque due to the point loads. Again, nothing in equation 8 discloses or suggests a gravity center position of a link or a gravity center position of a robot. Equation 10 of Seraji shares similarities with equation 3 of Seraji and expresses a relation between torque and joint angles. Applicant respectfully submits that torque and entire angular momentum are two different matters.

Therefore, Applicant respectfully submits that claim 1 is patentable.

For reasons similar to those described above with regard to independent claim 1, independent claim 8 is also patentable.

Claim 7 recites, *inter alia*:

“...wherein the redundancy drive-method is set to minimize system state changes and target state deviation.” (emphasis added)

The Office Action (see page 4) relies on column 24, lines 5-column 29, lines 40 to reject wherein the redundancy drive-method is set to minimize system state changes and target state deviation, as recited in claim 7 (emphasis added). The cited portion teaches utilizing a redundancy to minimize an objective function. Seraji indeed discloses that the objective function

involves inertia (see equation 12). Nothing in Seraji teaches or discloses that the objective function involves system state change and target state deviation.

Therefore, Applicant respectfully submits that claim 7 is patentable.

For reasons similar to those described above with regard to independent claim 7, independent claim 8 is also patentable.

IV. DEPENDENT CLAIMS

The other claims are dependent from one of the independent claims discussed above, and are therefore patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Similarly, because Applicant maintains that all claims are allowable for at least the reasons presented hereinabove, in the interests of brevity, this response does not comment on each and every comment made by the Examiner in the Office Action. This should not be taken as acquiescence of the substance of those comments, and Applicants reserve the right to address such comments.

CONCLUSION

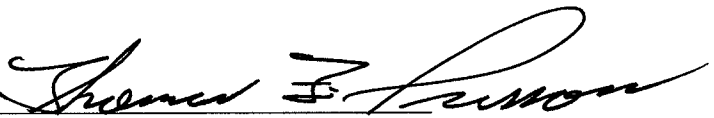
In the event the Examiner disagrees with any of the statements appearing above with respect to the disclosures in the cited reference, or references, it is respectfully requested that the Examiner specifically indicate the portion, or portions, of the reference, or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicant respectfully requests early passage to issue of the present application.

Respectfully submitted,

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